

SOLARISE

High-Performance
Photovoltaic Solar Systems



since 1895



We are a market-leading manufacturer of high-quality roofing and waterproofing systems for commercial, residential, industrial and public sectors

Working in partnership with Surveyors, Architects and Facilities Managers, we deliver robust, proactive & long-term waterproofing solutions for all roofing assets.

For 20 years, our dedicated Technical Managers have developed partnerships with over 4,500 schools, NHS trusts, councils and private companies across the UK, as a single point of contact to each customer.

We offer

- ✓ New build, refurbishment and preventive maintenance solutions
- ✓ Dedicated Technical Manager throughout your project
- ✓ Complimentary rooftop survey and condition reports
- ✓ Government Grant and Funding application support
- ✓ A diverse product range including metal, modified bitumen, liquid coatings and green systems
- ✓ Bespoke specifications and detail drawings
- ✓ Cloud-based roof asset management services



I recommend Garland UK for the quality of technical advice and expertise we receive. We always get the best result for our projects.

Dave Garvey
Contracts Manager, Crown Service



Solarise

We design our waterproofing systems with performance and longevity in mind, to provide our customers with the ultimate sustainable solution.

Solarise can be used alongside Garland's complete range of waterproofing systems, including bituminous membranes, green roofs, metal profiles and cold-applied liquid coatings.

With a bespoke installation of photovoltaic (PV) panels tailored to suit your roof, Solarise creates an effective and sustainable energy source for your business.

As the UK continues to work on reducing its carbon output, the government has pledged that the country will be carbon net-zero by 2050.

With more businesses embracing sustainable change than ever before, the ways in which energy is created and used to power our buildings is starting to shift.



What is Operational Carbon?

Operational carbon is the collective CO₂ emissions required for a building to run. This can be from many different types of energy sources that keep a building warm, cool, ventilated, lit and powered.

Typically the operational carbon of a building makes up around 60% of a building's total output, with such a large proportion at stake, effective action can be taken to reduce this, by investing in improvements to the thermal efficiency of a building and changing to green energy sources like solar power PV panels.



Why choose Solarise?



The way in which buildings create and consume energy can have a significant environmental impact

Solarise utilises solar power energy through PV panels, making it one of the most versatile renewable technologies you can choose.

Whether it is for generating electricity or for heating and hot water applications (solar thermal), there are significant environmental benefits to be gained by incorporating a PV panel system into your building's roof design.

Benefits



Save money on operational running costs



Reduce the carbon output of your business



Minimise the impact of energy tariff increases



Fast return on investment



Quick installation



Fully utilise unused roof assets



Low maintenance

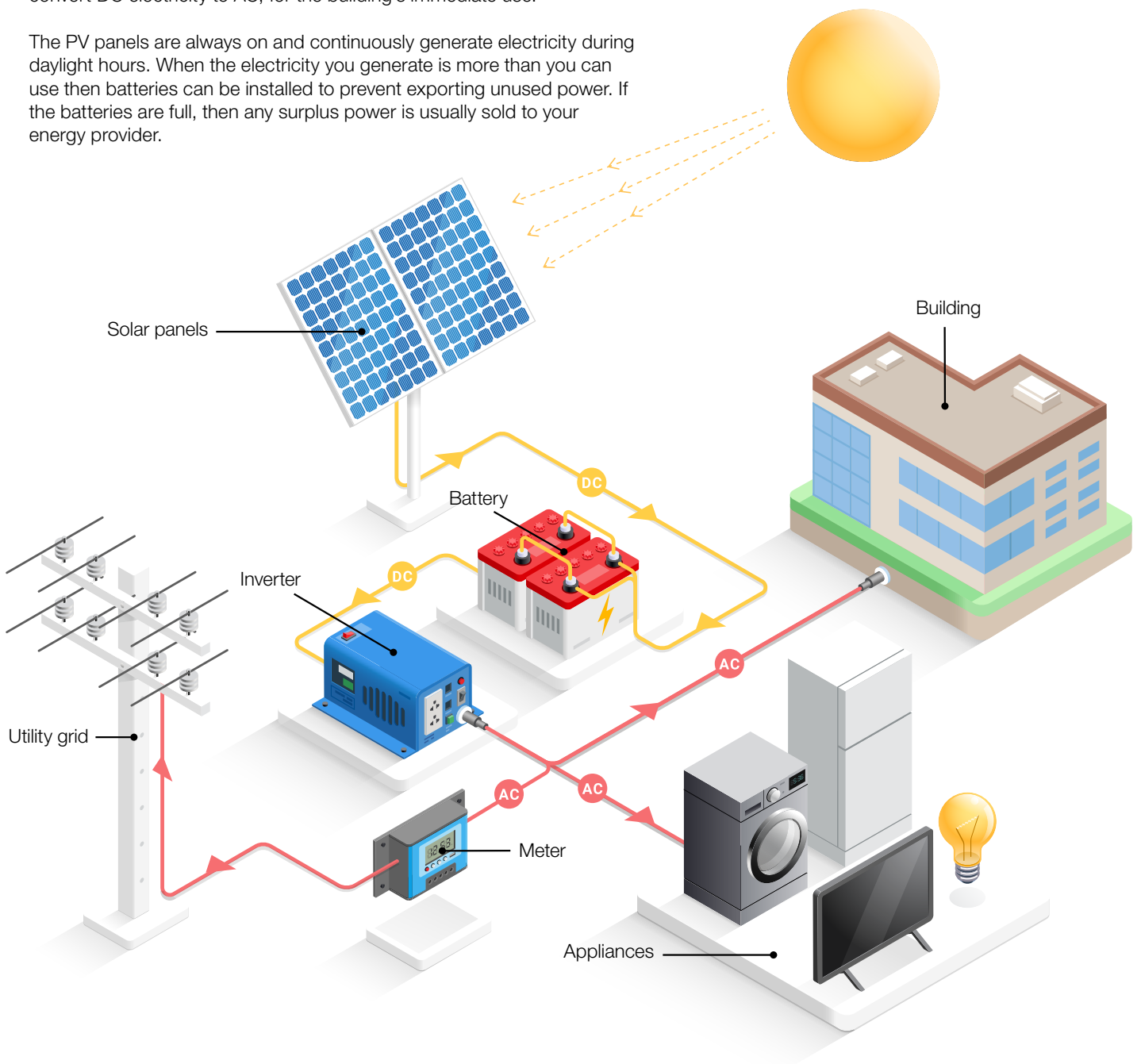
How does the Solarise system work?

The Solarise system can be installed on top of any Garland waterproofing system. The photovoltaic (PV) panels directly convert sunlight into energy, through a series of solar cells. PV systems only require daylight rather than direct sunlight to generate electricity, giving you a guaranteed energy source even on a cloudy day.

When sunlight hits the Solarise panels, photons are converted into electrons. As these electrons pass through the cells of the panel they're converted into electricity. The higher the intensity of the sun, the greater the number of photons, the higher the flow of electricity.

PV cells produce electricity in the form of a direct current (DC), which is in contrast to the power used by conventional mains electrical equipment which is Alternating Current (AC). An inverter is needed to convert DC electricity to AC, for the building's immediate use.

The PV panels are always on and continuously generate electricity during daylight hours. When the electricity you generate is more than you can use then batteries can be installed to prevent exporting unused power. If the batteries are full, then any surplus power is usually sold to your energy provider.



Solarise FAQ

What type of maintenance is required?

Solar panels are generally self-cleaning, especially if positioned at an angle of over 15 degrees. We advise that Solarise systems be visually inspected once a year and cleaned if necessary.

Do you need a south-facing roof?

Solarise panels have a range of frames, mounts and fixings, which means that whilst the south-facing roof is preferred, north-facing roofs can still benefit. The Solarise system can be installed on any roof orientation and still achieve electricity generation targets.

How long does it take to install a Solarise system?

The Solarise system is simple to install and will typically be completed in 1-2 days, depending on the size of the installation.

How long does it take to see a return on investment?

Renewable energy generation provides an excellent return on capital investment, where on average, you can expect to see a return on your investment in as little as 4 years and typically within 6 years of a Solarise installation.

How much energy will Solarise generate?

This will depend on several factors, such as the building's geographical location, orientation and pitch. Your dedicated Technical Manager will carry out detailed surveys and reports to calculate the expected energy savings and financial benefits of your Solarise installation.

How long will the Solarise system last?

Solarise comes with an industry-leading, 10-year Single-Point Guarantee. Built to last, the Solarise panels will generate at least 80% of the initial output in the 25th year.

What can Solarise be installed on?

The bespoke frame and mounting options ensure the Solarise system can be installed on any Garland UK waterproofing system. This includes bituminous membranes, metal profiles, cold-applied liquid coatings, or green roof systems.



The right solution for every roof

Solarise gives you complete design flexibility for flat and pitched roof installations, with its interchangeable collection of panels, frames and fixings.

With an array of options available, the renewable solar energy from a Solarise installation can optimise a building's green energy output, even with a north-facing orientation.

Solarise system

PHOTOVOLTAIC (PV) PANELS

The PV panels convert light into direct current (DC) electricity. Assembled with multi-busbar PERC cells, the half-cell configuration of the PV panel modules offers the advantages of higher output power, reduced shading effect on the energy generation and advanced tolerance to mechanical loading.



INVERTERS

Connected to the PV panels via DC cables, inverters convert DC into alternating current (AC) electricity for use in buildings.



FRAMES & FIXINGS

To secure the PV panels to a roof, wall or surface a variety of different frames and fixings are available to choose from.

Ballasted

Ideal for flat roofs, a ballasted frame ensures the waterproofing integrity isn't compromised with penetrations to the roof system. Ballasted frames are load supported and can be used with existing PV panels, creating flexibility for new and pre-owned systems.

Fixed

Suitable for pitched roofs, metal roofs or metal cladding, a fixed or mounted fixing made up of metal clamps and rails can be installed to the roof, for efficient PV panel mounting.



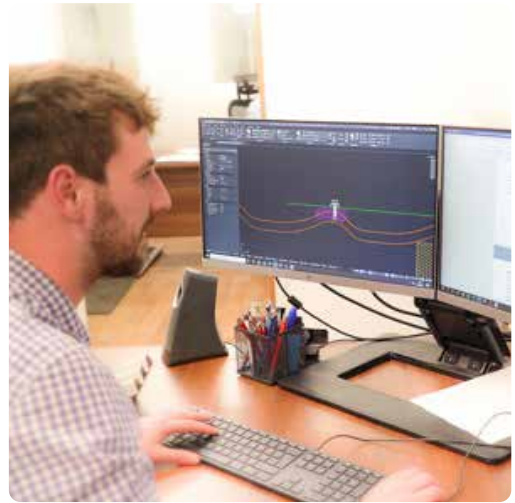


Installed by expertly trained and approved PV contractors, Garland UK will oversee the project management of your Solarise installation from the initial roofing survey through to maintenance and aftercare.

Design Considerations

In the early concept stages, the project viability, carbon reduction and yield capabilities of your roof will be carefully assessed by your dedicated Technical Manager to ensure that the optimum carbon reductions and return on investment are achieved for your building.

Through detailed surveys and reports of your roofing assets, we will take any unknowns out of your project to enable the most efficient design, performance and installation of your Solarise system.



Building energy usage

Understanding the building's day to day operations will have a significant impact on the PV panel design, whether it is a school that is open 5 days a week to a factory that is open and running 24 hours a day, 7 days a week.



Pitch and orientation

Solarise can be installed on a building of any orientation. Consideration of the roof pitch will ensure the PV panel design is not affected by high shade areas, or alternatively if a wall-mounted system may be more suitable.



Roof structure

The volume of PV panels required to meet your desired energy requirements can considerably increase the load on the existing roof structure. Early consideration, during the design stage, will assess the structural integrity of the roof.



Existing plant & access points

Your Technical expert can advise on a bespoke PV panel design to maximise carbon reduction and energy yield, whilst allowing for your existing roof access, plant and service requirements.



Green roofs

A perfect way to bring underutilised roof spaces to life. Combining green roof and PV panels provides an ultra-sustainable roof, that has been carefully engineered to offset the building's operational carbon footprint.



Planning Permission

Typically the installation of a PV system doesn't require planning permission. Your Technical Manager will consult with your local authority to ensure the installation is compliant and meets all levels of Building Regulations.

Solarise Credentials



Compliant green roof system



Code for a sustainable environment



International Electrotechnical Commission



Meets UK/EU safety, health and environmental requirements



Long-term Cost Savings

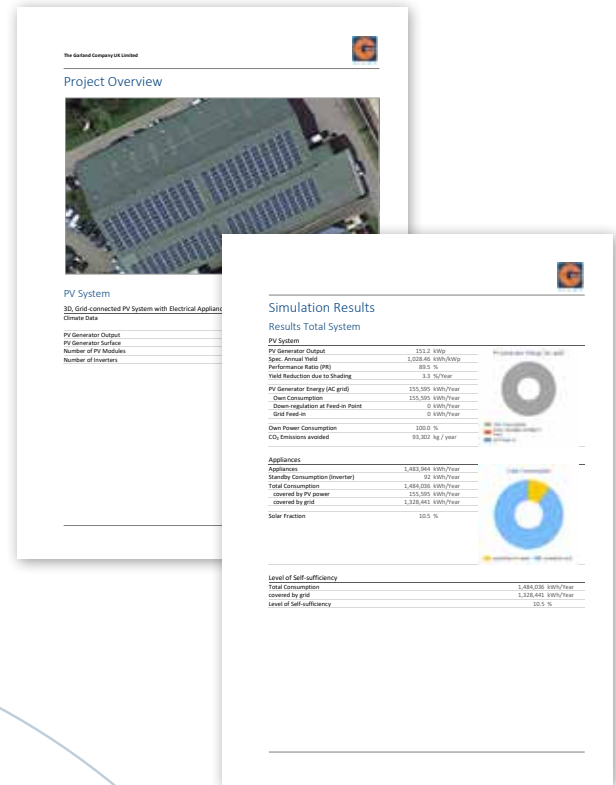
Installing a Solarise system will provide an excellent return on capital investment, with typical payback in as little as 4 years*.

The Solarise system will pay for itself in a short space of time, effectively producing free energy for a building and a significant cost saving for the building owner.

As electrical tariffs rise, these returns will become quicker and businesses will likely see themselves paying off the initial cost of installing PV panels around year 4. Meaning from year 5, they will be saving on their annual running costs.

Our Technical Managers will work with you to carry out a detailed survey of your building, creating a tailored report that accurately calculates the energy saving and financial benefits of your Solarise installation.

*Based on an average 250m² PV roof installation with a 21.1p/kWh capacity and a 4.6 years ROI.



Solarise Financing Options

We offer finance packages for businesses looking to make significant environmental changes without the upfront cost.

Solarise financing options allow our customers to start their renewable energy projects immediately, without the need for significant capital investment.

Asset Leasing Finance enables businesses to purchase a new system and spread the cost over a desired repayment period. This enables companies to offset their current energy cost savings against the new solar system cost.

In addition, Solarise is eligible for Super-Deduction Tax, where a business can also claim 130% capital allowances on Solarise systems until March 2023. To qualify for the super-deduction, you must be a corporate entity paying corporation tax on taxable profits.

Solarise Leasing Benefits

- ✓ Accelerate your sustainability plans
- ✓ Spread cost and risk
- ✓ Fix costs to help budget
- ✓ Retain capital in your business
- ✓ Tax savings available
- ✓ Include any roof repair costs within the financing package

Garland UK has partnered with [Bluestone Leasing](#), an award-winning UK team of service-focused finance professionals dedicated to providing asset finance and leasing solutions for the public and private sectors.



Garland's Single-Point Guarantee

Our Single-Point Guarantee gives you complete peace of mind, with no hidden surprises.

Garland UK is a 100% employee-owned subsidiary of Garland Industries and we are one of the oldest and most financially stable manufacturers in the construction industry.



10 year Single-Point Guarantee

Solarise comes with an industry-leading, 10-year Single-Point Guarantee, where Garland UK accepts the entire liability for the design, material and quality of the installation workmanship.

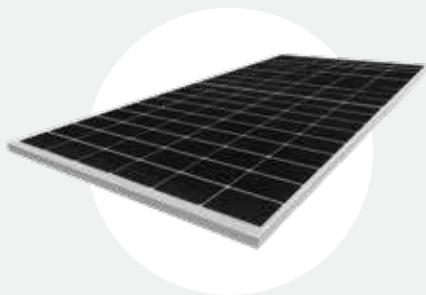
In the unlikely event of a fault, we will rectify any issue quickly and effectively, without charge.

Learn more about how we protect your assets with our industry leading Single-Point Guarantees
[Read more >](#)

How we guarantee the Solarise system

10 YEAR PRODUCT GUARANTEE

Your Solarise system will include a series of custom fit PV panels, inverters, frames, fixings and mounts for you roof. The products that make up your Solarise system are all covered by our 10 year product guarantee.



25 YEAR LINEAR POWER GUARANTEE

We guarantee the performance and linear power output of your Solarise system for up to 25 years.

Over several years of constant use, solar cells in the PV panels can degrade and lose power. Garland UK guarantees that the PV panels on your building will generate a minimum of 80% initial output in the 25th year when regularly maintained.





Industry leading service

As a partner for the life of your building, our Technical Managers work tirelessly to provide expert advice and support services.

We are committed to raising standards in the industry, and work closely with you to ensure your project delivers on its environmental initiatives.

PartnerCare

Giving you long-term confidence in a Garland system, PartnerCare takes the unknowns out of your roofing project, delivering market-leading support and solutions through your expert local Technical Manager.

[Read more >](#)



Why choose Garland?

- ✓ Protected against design, system and installation liability
- ✓ Garland UK take 100% ownership of any issue with your roof system
- ✓ Provides you the customer with complete peace of mind
- ✓ Simple and direct process to rectify any issues



Case Study

Public sector, South West

Public sector building mitigates **93 tonnes** of CO² emissions

As part of the roof refurbishment project at these prominent public sector buildings in the South West, Garland's lightweight and robust trapezoidal metal roofing system, R-MER CLAD, was installed to ensure 5,000m² of the building's roofs were completely watertight and the essential operations of the business could run as normal.

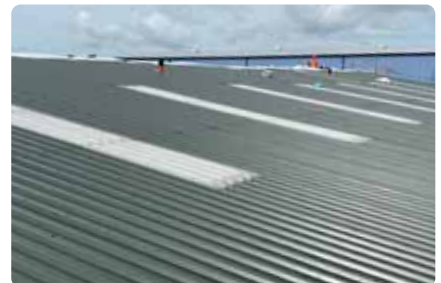
Following the R-MER CLAD installation, The Solarise system was specified to support the building's sustainability initiatives, reducing the CO² output and delivering a significant saving on future energy costs.

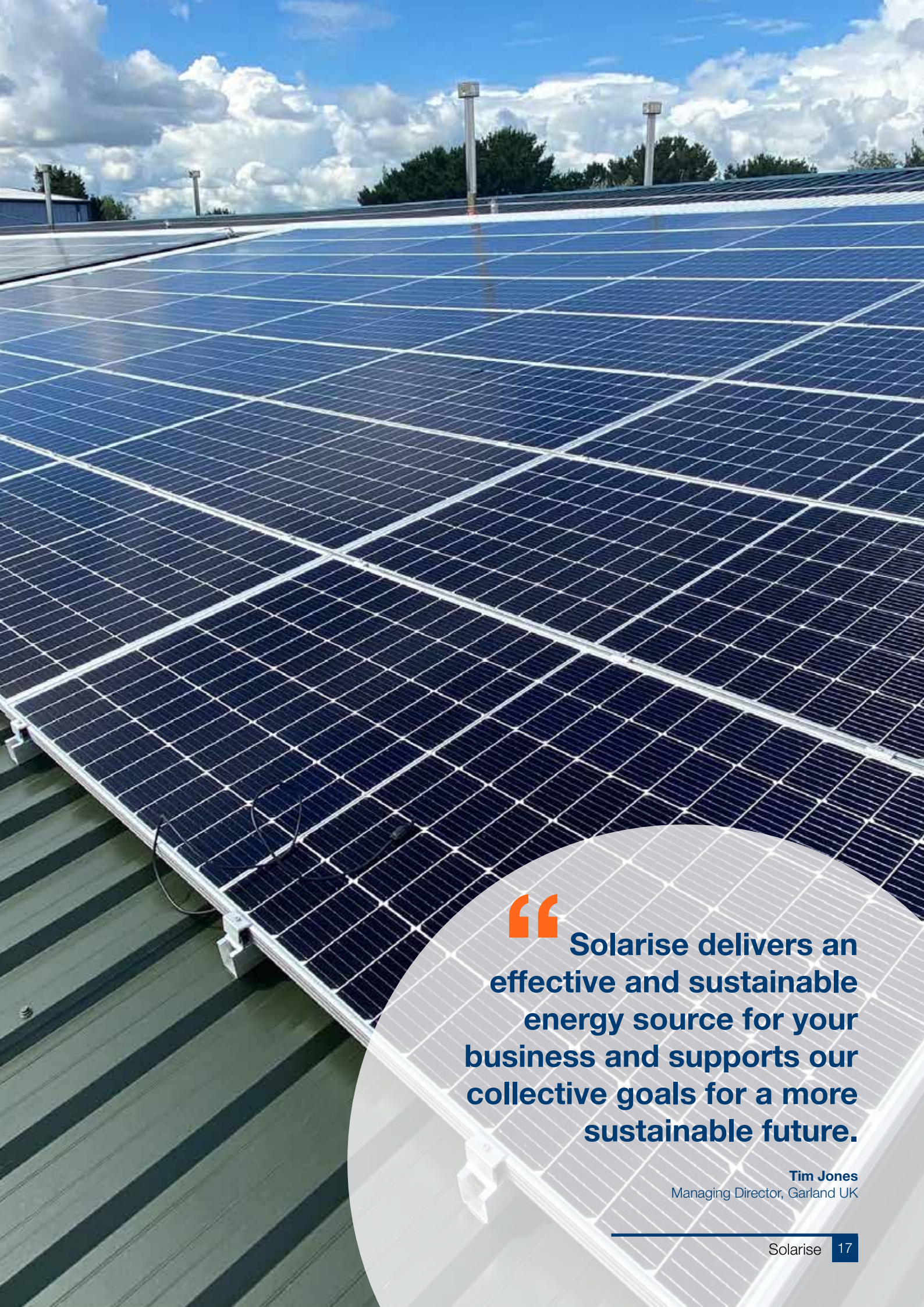
Detailed assessment and calculations were carried out for the buildings, concluding that a total of 336 PV modules would ensure that over 93 tonnes of CO² emissions could be

negated annually. With a clearly defined return on investment within 6 years, the installation of the Solarise system will generate over 155,000 kWh of electricity annually for the building's daily operations.

For the installation, a custom bracket system was fixed directly onto the crowns of the R-MER CLAD roof sheet, alongside EPDM back washers to ensure that the roof's waterproofing was not compromised.

With the new thermally improved R-MER CLAD roofs and energy-generating Solarise systems in place, the organisations investment has safeguarded their property assets and significantly reduced its carbon footprint.





“ Solarise delivers an effective and sustainable energy source for your business and supports our collective goals for a more sustainable future.

Tim Jones
Managing Director, Garland UK



Contact your local expert today.

Our Technical Managers are on hand to assist and provide technical advice on your building envelope and roofing systems.



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garlanduk.com